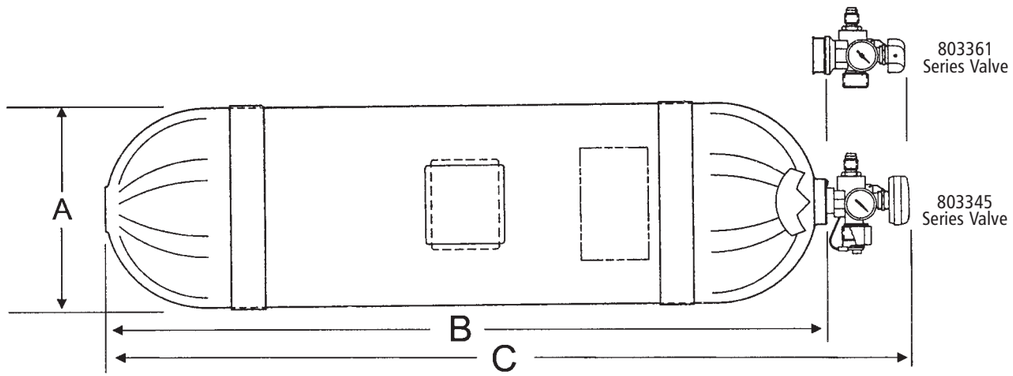
Table 5 Cylinder Configuration Data

Configuration	Capacity Cu. Ft. (Liters)	Cylinder Part Number	Dimensions Inches (cm)			Empty Weight Lbs. (kg) MAX	****Charged Weight Lbs. (kg) MAX
			A	B	C		
22	22.8 (646)	21507-01	5.1 (12.9)	19.6 (49.8)	24.07 (61.1)	4.0 (1.8)	5.9 (2.7)
40	39.9 (1130)	21507-05	6.7 (17.0)	20.2 (51.3)	24.57 (62.4)	6.7 (3.0)	10.0 (4.5)
50	50.1 (1418)	21507-02	6.7 (17.0)	24.7 (62.7)	29.17 (74.1)	7.9 (3.6)	12.1 (5.5)
77	77.1 (2183)	21507-03	7.5 (19.1)	29.3 (74.4)	33.77 (85.8)	12.9 (5.8)	19.3 (8.7)
15	115.7 (3275)	21507-04	9.0 (22.9)	31.3 (79.8)	35.77 (90.9)	18.1 (8.2)	27.7 (12.6)

**** Weights shown DO NOT include weight of valve assembly (see Table 2), or weight of safety outlet assembly (see Table 3)



WARNING

IMPROPER USE OR IMPROPER MAINTENANCE OF THIS EQUIPMENT MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

THESE ASSEMBLIES ARE INTENDED TO BE USED ONLY FOR AVIATION APPLICATIONS AS COMPONENTS OF A COMPLETE AVIATION OXYGEN SYSTEM USED ONLY BY, OR UNDER THE SUPERVISION OF, A PILOT OR CREW MEMBER TRAINED AND QUALIFIED IN ITS USE.

THIS EQUIPMENT IS TO BE SERVICED ONLY IN ACCORDANCE WITH THE APPLICABLE COMPONENT MAINTENANCE MANUAL AVAILABLE FROM AVOX SYSTEMS AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS AND ONLY BY SERVICE TECHNICIANS TRAINED IN THE INHERENT HAZARDS OF HIGH PRESSURE AVIATION OXYGEN AND KNOWLEDGEABLE IN THIS EQUIPMENT. THE NAMES OF AUTHORIZED SERVICE CENTERS ARE AVAILABLE FROM AVOX SYSTEMS OR YOUR AUTHORIZED AVOX SYSTEMS DISTRIBUTOR. THIS EQUIPMENT SHALL BE USED ONLY WITH AVIATION BREATHING OXYGEN MEETING THE REQUIREMENTS OF MIL-PRF-27210.

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AS9100

897 Series Cylinder and Valve Assembly

The AVOX Systems 897 Series Cylinder and Valve Assembly is a self-contained, unregulated, high pressure oxygen source that supplies aviation grade oxygen to crew members and passengers.

The 897 Series consists of a lightweight composite cylinder on which a manually operated ON/OFF valve is installed. One or more units may be installed in order to provide the necessary supply to the oxygen distribution system of the aircraft.

Two styles of manually operated, slow opening valve assemblies are available for use with the 897 Series: the 803345 Series metal to metal valve and the 803361 Series soft seated valve. Both valve styles perform the same ON/OFF function.

Several safety outlet assemblies are available for use with either of the two valve styles.

The number and size of assemblies needed are determined by the oxygen volume requirements of the specific aircraft.

AVOX Systems

897 Series Cylinder and Valve Assembly

897 Series Features:

The following information applies to both the 803345 Series metal to metal valve and the 803361 Series soft seated valve designed for use with the 897 Series.

Designed as slow opening valves, the outlet flow is controlled by the amount of turns of the low torque handwheel. This safety feature reduces the chance of rapid pressure buildup in the system.

Opening the valve allows high pressure (1850 psi/12.76 MPa) oxygen from the cylinder to flow from the outlet port of the valve. Closing the valve retains the pressurized oxygen in the cylinder and lower portion of the valve body. Some of the valve configurations available are equipped with pressure gauges to indicate oxygen pressure remaining in the cylinder.

A number of safety outlet assemblies are available for use with both the 803345 Series and the 803361 Series. These safety outlet assemblies are mounted to the valve bodies and are exposed to pressure entering the inlet port of the valve. Should the unit become over-pressurized (i.e., reach a level of 2500-2750 psi/18.96 MPa), the disc contained within the safety outlet assembly will rupture. The valve assemblies outlined here are simple ON and OFF type valves and are not intended for regulating oxygen flow. During normal operation, the valve should always be in only one of two positions: opened or closed.

The composite cylinder is a US Department of Transportation rated pressure vessel that houses oxygen at a nominal working pressure of 1850 psig (12.8 MPa). It is made from lightweight seamless aluminum and is over-wrapped with Kevlar® fiber. Each cylinder comes equipped with two elastic protective bands for mounting into brackets.

•Note: Kevlar is a registered trademark of E.I. DuPont De Nemours & Co.

Each part number contains 8 digits made of three sections, as described below.

Part Number 897 - [ ] [ ] 0 [ ]

Valve Assembly Callout (Table 2)	Regulator Part Number	Safety Outlet Assembly Callout (Table 3)	Safety Outlet Part Number	Cylinder Number Callout (Table 5)**	Oxygen Volume Cubic Ft. (Liters)	Cylinder Part Number
1	803361-01	0	800844-00	22	22.8 (646)	21507-01
2	803361-02	1	801153-00	40	39.9 (1130)	21507-05
3	803361-03	2	800843-00	50	50.1 (1418)	21507-02
9	803345-01	3	22606-01	77	77.1 (2183)	21507-03
		4	800844-01	15	115.7 (3275)	21507-04
		5	10722-00			
		6	2814-00			
		8	22608-01			
		9	22608-02			

**Includes Protective Elastic Bands

Example: 897 – 18015
1 = P/N 803361-01 Regulator Assembly Callout
8 = P/N 22608-01 Safety Outlet Assembly Callout
15 = 115.7 Cu.Ft. Composite Cylinder

Table 1 Difference Data – Valve Characteristics

Characteristic	Valve Assembly	
	803361	803345
Inlet Filter	No	Yes
Outlet Filter	No	Yes
Turns (Open/Close) (Approximate)	3.5	6.5
Open/Close Torque (Maximum)	15 in. lbs. (1.7 Nm)	30 in. lbs. (3.4 Nm)
Operating Torque (Average)	7 in. lbs. (0.8 Nm)	7 in. lbs. (0.8 Nm)

Table 2 Valve Configuration

Valve Callout	Part Number	Gauge (Y/N)	Gauge Style	Seat Type	Weight Lbs. (kg)
1	803361-01	Y	Flush Mounted	Soft	1.66 (.752)
2	803361-02	N	Plugged Port	Soft	1.48 (.670)
3	803361-03	Y	Flush Mounted with Guard	Soft	1.81 (.820)
9	803345-01	Y	Flush Mounted	Metal	1.66 (.752)

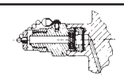
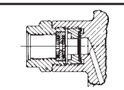
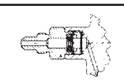
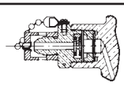
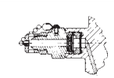
Table 3 Safety Outlet Configurations

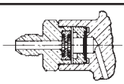
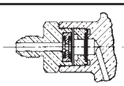
Safety Outlet Callout***	Part Number	Thread	Weight Lbs. (kg)
0	800844-00	.438-20 UNF-3A	.19 (.086)
1	801153-00	.500-20 UNJF-3B	.09 (.041)
2	800843-00	.625-20 UN-3A	.17 (.077)
3	22606-01	.438-20 UNF-3A	.17 (.077)
4	800844-01	.500-20 UNEF-3A	.19 (.086)
5	10722-00	1/8 – ANPT	.16 (.072)
6	2814-00	N/A	.11 (.050)
8	22608-01	.438-20 UNF-3A	.12 (.054)
9	22608-02	.500-20 UNF-3A	.13 (.059)

***See Table 4 for details of safety outlet assembly
Note: A replacement Valve with mounted Safety Outlet Assembly (less cylinder) may be ordered as indicated below. Select the appropriate configuration number to complete the part number as indicated.
Ex: **803440 – 9 9** = Part Number 803440-99

- 9 — Safety Outlet Assembly (See Table 3 Above) P/N 22608-02
- 9 — Valve (See Table 2 Above) P/N 803345-01
- 803440 — Basic Part Number

Table 4 Safety Outlet

Safety Outlet Callout	Part Number	Thread Configuration
0	P/N 800844-00 (.19 lbs.)	 MS 33656-E4
1	P/N 801153-00 (.09 lbs.)	 MS 33649-5
2	P/N 800843-00 (.17 lbs.)	 .625-20 UN-3A
3	P/N 22606-01 (.17 lbs.)	 MS 33656-E4
4	P/N 800844-01 (.19 lbs.)	 MS 33656-E5

Safety Outlet Callout	Part Number	Thread Configuration
5	P/N 10722-00 (.16 lbs.)	1/8 ANPT PORT
6	P/N 2814-00 (.11 lbs.)	NO OVERBOARD PROVISIONS
8	P/N 22608-01 (.12 lbs.)	 MS 33656-4
9	P/N 22608-02 (.13 lbs.)	 MS 33656-5